## ABSTRACT OF THE DISCLOSURE

The present invention uses at least one array of complex-shaped fibers that contain at least one wire electrode running the length of the glass structure to fabricate a fluorescent lamp. At least one of the complex-shaped fibers has a complex cross-section that forms a channel, which supports a plasma gas. The array of fibers can be composed flat to form a fluorescent lamp or in a cylindrical or conical shaped fluorescent lamp.